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Acquisition of a very low voltage and a low frequency biomedical signal-frequency selective filter design (Conference Paper)

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Abstract

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In this paper we present a review on the frequency content and voltage level in biomedical signals beside showing how extraction of chosen features and parameters from these signals, are important for many medical diagnostic applications. A 4th order band-pass filter using high and low-pass Sallen Key active filters are proposed, and the values of passive component for different biomedical filters have been provided. The circuits are simulated and the frequency response is shown. The power spectrum density (PSD) of an EMG signals is presented where it becomes clear that the PSD graph can provide the value of the bandwidth for the signal of interest. The response of the filter is validated and the utility of the conditioning circuit is testified. © 2014 IEEE.

Author keywords

biomedical signals frequency selective filters power spectrum density

Indexed keywords

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